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SOVIET CRITICISM OF LYSENKO'S THEORY

[Comment: This is a summary of an article published by the editors of Botanicheskiy Zhurnal under the title "Some Results of the Discussion Concerning the Problem of Species and of the Formation of Species and Further Tasks To Be Accomplished by This Discussion" in Vol 39, No 2, March-April 1954 issue of this journal, pp 202-227.

The article compiled by the Russian editors summarizes the results of a discussion which was initiated by criticism directed against Lysenko's theory of the evolution of species in the pages of Botanicheskiy Zhurnal in 1952 in articles contributed by N. V. Turbin and N.D. Ivanov. In a special statement addressed to the readers of the Journal, at the conclusion of the article, the editors invite Soviet botanists to contribute papers dealing with the problems of species and species formation. They state that Lysenko's theory has been definitely refuted, so that further criticism will not lead to any useful results: under the circumstances, constructive suggestions which will contribute to the development of Soviet biology and agriculture should be made in preference to criticizing a theory which can no longer be regarded as valid.]

The discussion on the problem of species and species formation which has been initiated in the pages of Botanicheskiy Zhurnal has elicited great interest and has been taken up by other periodicals. It has also found a lively response in the People's Democracies. The protagonists of the new theory of species (Lysenko's theory), instead of making matter-of-fact replies dealing with the problem under discussion, maligned their opponents, calling them Malthusians, idealists, and subjectivists. They said that the discussion must be stopped (V. S. Dmitriyev), an attitude against which the journal Kommunist protested. (Kommunist, No 5, 1954).

The basic precepts of the new theory of species and species formation were formulated during the discussion. On the basis of the data presented in the course of the discussion, the conclusion has been made that the generation of new species by old species in the sense of Lysenko's conception has not been proven in a single instance. The theory of Darwin, which has enriched science during the 100 years of its existence, explains the evolution of living beings and living matter much more completely and profoundly than Lysenko's theory. The definition of species which has been given by Lysenko represents a step backwards from the standpoint of the results achieved by contemporary systematics. From Lysenko's assertion that species cannot by crossed, the conclusion logically follows that remote hybridization and selection according to the methods which have been successfully applied by I. V. Michurin are futile and should not be attempted.

The new theory of species destroys the basis of the agricultural techniques applied in practical field cultures. If the assumption is made that soft wheat when cultivated under good agricultural conditions generates hard wheat, it follows necessarily that soft wheat should be cultivated under inferior agricultural conditions. The concept of Lysenko and V. S. Dmitriyev in regard to the generation of weeds by cultivated forms of useful plants has a disorienting effect on agricultural workers engaged in the extermination of weeds. Lysenko's theory is also sterile from the standpoint of phytopathology, because the complex evolution of parasitic fungi can be explained only from the standpoint of Darwin's theory.

The new theory of species is refuted by all available paleontological and biostratigraphic data.

Further benefit which may be expected from the discussion consists in the development of methods of investigation and of a program of research dealing with the theory of species and species formation, reinforcement of work aiming at theoretical generalizations based on the experience of systematizers, particularly as far as determination of the specificity of the dimensions, limits, and characteristics of species of various plants is concerned, and launching of an extensive study of the interspecies and intraspecies relationships of plants both under natural conditions and in experiments.

More attention should be paid to the study of the history of biology, including the history of the theory of species and species formation. The discussion of the subject must be free and conducted on a broad basis in order to make certain that persons holding different scientific views may present these views under conditions which will insure a calm and businesslike treatment of the subject matter.

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